Claims

1. Method for determining accumulated body fatigue index (BFI), wherein one or more parameters from the measurement of one or more signals are obtained sequentially as input and these parameters being information on the intensity of physical activity, <u>characterized</u> in that
    - BFI has a predetermined initial value, and
    - next BFI value is always a sum of BFI-value and a difference, and
    - the difference is combination of upslope and optional downslope components of BFI determined with the said parameters,
    - the upslope component and the optional downslope component are each determined with a function, which is scaled by a preset physiological character.

2. Method according to claim 1, <u>characterized</u> in that the function is independent from the duration of the physical activity.

3. Method according to claim 1 or 2, <u>characterized</u> in that the preset physiological character relates to an accumulated value, which is a function of quantity of body requirements for recovery after exercise and physical activity.

4. Method according to any of claims 1 - 3, <u>characterized</u> in that the preset physiological character relates to an accumulated value, which is a function of a training effect.

5. Method according to any of claims 1 - 4, <u>characterized</u> in that the downslope component of the BFI estimates recovery and decrease in BFI with decreasing physical activity.

6. Method according to any of claims 1 - 5, <u>characterized</u> in that it is determined a prediction of the time interval after which the user engaged in physical activity is expected to attain a preset limit due to accumulation of body fatigue that is induced by continuing physical activity in the chosen intensity.

7. Method according to any of claims 1 - 4, <u>characterized</u> in that it is determined by the prediction of the time interval requirements for recovery after the physical activity.

8. Method according to claim 1, <u>characterized</u> in that information on the increased heart beat level during recovery is determined.

9. Method according to claim 1, <u>characterized</u> in that the wherein information on the level and recovery of oxygen consumption is used to enhance the accuracy of oxygen consumption or energy consumption estimation during recovery from the physical activity.

10. Method according to claim 1, <u>characterized</u> in that information on the level of BFI is used in the estimation of oxygen consumption or energy consumption level in addition to other method.

11. Method according to claim 5, <u>characterized</u> in that the predicted downslope component of heart rate or heart rate variability is used as a reference value to determine information.on the process of recovering from physical activity.

12. Method according to any of claims 1 - 11, <u>characterized</u> in that the method is used in a wearable computer.

13. Method according to any of claims 1 - 11, <u>characterized</u> in that the method is used in a fitness exercise equipment.

14. Method according to any of claims 1 – 11, <u>characterized</u> in that the method is used in a PC-software.

15. Method according to any of claims 1 – 14, <u>characterized</u> in that the method is used in ECG/ pulse -monitoring equipment.

16. Method according to any of claims 1 – 14, <u>characterized</u> in that the BFI is indexed as a function of exercise time and exercise intensity.

17. Method according to any of claims 1 – 16, <u>characterized</u> in that an intermediate measure reflecting accumulative physical activity is used in the calculation instead of BFI, which measure is then transferred to BFI-value.